YOUR GUIDE TO ASSESSING ASTM/CPSC COMPLIANCE

THIS AUDIT GUIDE IS PROVIDED AS A PUBLIC SERVICE

This audit allows the user to both judge the playground against the 1998 ASTM standard F1487 and the CPSC 1998 Handbook, and also to prioritize actions needed for upgrading. It uses a priority system based upon one which appeared in the National Park Service publication **Trends**. The three levels of priority, as identified in this article, are:

1. ***Any condition which is life-threatening or can cause severe, permanent disability.***
2. ***Any condition which can cause serious or non-disabling injury.***
3. ***A condition which may cause slight injury; *a condition which may not have caused injury but does not meet the requirements in ASTM F1487 Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use, and the 1998 CPSC Handbook for Public Playground Safety.***

This last statement has been added by the auditors to the priority ratings identified in* ***Trends**.*

In addressing these priorities it is obvious that priority (1) items must be addressed immediately, followed by the second and third priorities. Together they form the master plan for upgrading your playground.

An audit sheet should be filled out for every piece of play equipment and every playground you operate. These reports should be kept on file for the life of the equipment and play area.

INTRODUCTION

In 1981 the U.S. Consumer Product Safety Commission (CPSC) published its **Handbook for Public Playground Safety**. This was a set of guidelines designed to reduce the number and severity of accidents on public use playgrounds. The Handbook was promulgated in response to the growing number of serious accidents which were reported on playgrounds and play equipment from hospital emergency rooms throughout this country. The 1981 guidelines were directed towards play areas for children ages 5 to 12 years.

In November, 1991 the CPSC issued a revised **Handbook for Public Playground Safety**, with many changes from the previous version. The new version addressed equipment for children from the age of two years to twelve years and, based on current injury data, identified some new areas of concern. This handbook has had 2 revisions since 1991.

ASTM (American Society for Testing and Materials) is one of the largest voluntary standard-setting organizations in the world. In 1988 ASTM undertook a project to develop safety standards for Public Use Playground Equipment. A committee of over 140 professionals and consumers, dedicated to playground safety, worked on the development of this standard and, in December, 1993, ASTM Published F1487, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, which has since had 2 revisions.

This audit publication measures existing playground equipment against the latest ASTM F1487 and the CPSC Guidelines. Although the ASTM standard is "voluntary," it was developed with the cooperation of the CPSC, and communities seeking to upgrade their playgrounds should use both documents as resource points. That is the intent of this publication.

It should be noted that there is a major difference between an audit and an inspection of the playground. The audit identifies the pieces that are on the playground, their current condition, and how they measure up to the ASTM specification F1487. In addition, the surfacing and design of the play are evaluated. The audit forms the basis for the development of a master plan to upgrade the safety of the play area and in addition to identifying the current conditions, it prioritizes the changes that have to be made to remove, repair, replace. Using the completed audits, a community can establish both the plan and budget for playground upgrading.This is especially important since few communities can afford to make all the identified changes at one time, and need to establish a plan to have their playgrounds meet the ASTM F1487 requirements.

After the audit is completed and playgrounds upgraded, regularly scheduled inspections should be held, to make certain that the playground remains in good condition. Of course constant inspections are crucial so that regular maintenance procedures can repair and replace worn and deteriorating parts of equipment.

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QUICK REFERENCE GUIDE

1998 ASTM SPECIFICATION F1487 AND
1998 CPSC HANDBOOK FOR PUBLIC PLAYGROUND SAFETY

SURFACING REQUIREMENTS

Methods Used to Determine Shock Absorbancy	200g maximum and 1000 HIC maximum
Critical Height (Definition)	Distance between playground surface and highest accessible part of equipment. The maximum height which yields no more than 200 g's and 100 HFC. Highest accessible part of equipment: • Swing – height of pivot point • Elevated Platforms – top of play equipment • Climbers and horizontal ladders – maximum height of structure • Merry-go-rounds – height of any part of perimeter on which child may sit or stand • See-Saws – maximum height attainable by any part • Spring Rockers – maximum height above the ground by any part
Use Zones (Definition)	Use Zone – where protective surfacing is required; The area beneath and immediately adjacent to a play structure or equipment that is designated for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment.
USE ZONES: **Stationary Equipment**	Should extend a minimum of 6 feet from perimeter. May overlay if designated play surfaces are no more than 30 inches above the protective surfacing.
Slides	At exit point 6 feet or platform height plus 4 feet measured from where gradient becomes 5 degrees, maximum 14 feet.
Single Axis Swings	Two times height of pivot point to surface front and back and 6 feet at either end. Ends may overlap.
Multi-Axis Swings	Six feet from pivot point plus length of suspending member, 6 feet at the ends. Ends may overlap.
Tot Swings	Two times height of pivot point to occupied swing seat, front and back, 6 feet at either end. Ends may overlap.
Merry-Go-Rounds	Six feet from perimeter.

Spring Rocking Equipment	Six feet from at-rest perimeter if intended for sitting. May overlap if seat is no higher than 30 inches.
	Seven feet from at-rest perimeter if intended for standing. Sides may not overlap.
Composite Equipment	Use zone for individual components in one design. Use professional judgement. Single and multi-axis swings.
Environment	None.

GENERAL HAZARDS

	ASTM	CPSC
Sharp Points, Corners, Edges	Should be none.	Should be none.
	Exposed open ends of all tubing not resting on the ground or otherwise covered shall have caps or plugs that cannot be removed without tools.	Exposed open ends of all tubing not resting on the ground or otherwise covered shall have caps or plugs that cannot be removed without tools.
Wood Parts, Corners	Smooth, free of splinters.	Smooth, free of splinters.
	All corners rounded.	All corners rounded.
	Metal edges rolled or round capping.	Metal edges rolled or round capping.
Protrusions	Should not be capable of entangling children's clothing or lacerating. (Use protrusion gauges.)	Should not be capable of entangling children's clothing or lacerating. (Use protrusion gauges.)
Suspended Members	No surface should protrude beyond test gauge.	No surface should protrude beyond test gauge.
Head Entrapment	Interior surfaces less than 3.5 inches or more than 9 inches.	Interior surfaces less than 3.5 inches or more than 9 inches.
Angles	Test for partially bounded openings.	Angle of vertex not less than 55 degrees, unless lower leg is horizontal or projects downward.
	Rigid shield can cover angle less than 55 degrees.	Rigid shield can cover angle less than 55 degrees.
Tripping Hazards	Not addressed.	All anchoring devices installed **below** playing surface.
	Not addressed.	No concrete footings exposed.
	Not addressed.	No environmental obstacles including rocks, roots, other ground protrusions.
	Not addressed.	Retaining walls highly visible, change of elevation.
	Support posts for balance beams shall not pose a tripping hazard.	Not addressed.

	ASTM	CPSC
Pinch, Crush, Shear Points	Should be none.	Should be none.
	Finger Probe test added.	
Materials	Use only materials with demonstrated durability.	Use only materials with demonstrated durability
	New materials shall be tested or documented by manufacturer.	New materials shall be tested or documented by manufacturer
	Ferrous Metals painted or galvanized. Plastics and other materials shall be protected against ultraviolet light.	Ferrous Metals painted or galvanized.
	Meet CPSC regulation for lead paint.	Meet CPSC regulation for lead paint.
	Wood naturally rot-resistant or treated after fabrication.	Wood naturally rot-resistant or treated after fabrication.
	CCA acceptable if dislodgeable arsenic on wood surface is minimized.	CCA acceptable if dislodgeable arsenic on wood surface is minimized.
	Creosote, pentachlorophenol and tributyl tin oxide not acceptable.	Creosote, pentachlorophenol and tributyl tin oxide not acceptable.
Hardware	Should not be removable without use of tools.	Should not be removable without use of tools.
	Fasteners corrosion resistant.	Fasteners corrosion resistant.
	Bearings or bearing surfaces that reduce friction or wear.	Bearings easy to lubricate or self-lubricating.
	S-hooks closed tightly as possible.	S-hooks closed tightly as possible.
Metal Surfaces	Not addressed.	Bare metal platforms and slide beds located out of direct sun rays.
Stability	When properly installed, equipment withstand forces for overturn, tip, slide or move in any way. Alternative to testing is professional certification.	When properly installed, equipment withstand forces for overturn, tip, slide or move in any way.
Maintenance	Comprehensive maintenance program.	Comprehensive maintenance program.
Installation	Follow manufacturer's instructions.	Follow manufacturer's instructions.
	Do not deviate from manufacturer's instructions.	Do not deviate from manufacturer's instructions.
	Not addressed.	Inspect before first use.
	Not addressed.	Keep all instructions on file.
	Durable label to identify manufacturer.	Durable label to identify manufacturer.
	Label of warning on surfaces.	Not addressed.

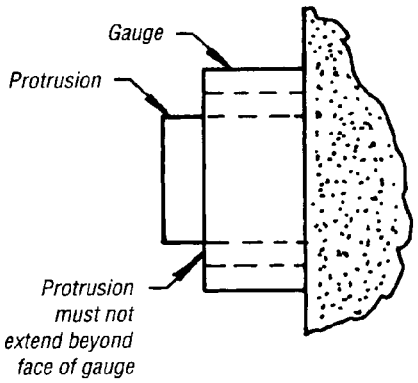
	ASTM	CPSC
Maximum Heights	Height restriction on horizontal ladders, balance beams and tot swings.	Height restriction on horizontal ladders, balance beams and tot swings.
General Cables, Wires, Ropes	None should be suspended between play units within 45 degrees of horizontal (if greater than 7 feet are exempt) doesn't apply to flexible climber — use bright colors for ropes & cables.	None should be suspended between play units within 45 degrees of horizontal (if greater than 7 feet are exempt) doesn't apply to flexible climber — use bright colors for ropes & cables.
Electrical Hazards	Not addressed.	Recommend: wiring shouldn't be in climbing reach; electrical boxes or meters locked.
Age Separation	Play equipment for a specific age group shall have all play activities meet requirements for that age group.	Separate areas should be provided for younger children with appropriately sized equipment (pre-schoolers require more supervision).

LABELING

Shall Read	All play structures and composites must carry a durable warning label and separate manufacturer's identification. Label shall not be able to be removed without a tool.	Signs should give adults guidance on age appropriateness of equipment (CPSC Guidelines).
Warning	Installation over a hard surface such as concrete, asphalt or packed earth may result in serious injuries or death from falls. Triangle with exclamation point inside shall precede "Warning."	

PLAYGROUND SAFETY AUDIT TESTING PROCEDURES

Protrusion Test Procedures
Successively place each gauge over any protrusion or projection and determine if it projects beyond the faces of the gauge (see figure).



Protrusion Test Procedure for Suspended Members of Swing Assemblies
Conduct the test with the suspended member in its rest position. Place the gauge (2 inches o.d. x 1-1/4 inches i.d. x 1/8 inch thick) over any protrusion on the front or rear surface of the suspended member such that the axis of the hole in the gauge is parallel to both the intended path of the suspended member and a horizontal plane. Visually determine if the protrusion penetrates through the hole and beyond the face of the gauge.

Entrapment Test Procedure for Completely Bounded Openings
Attempt to place the Small Torso Probe in the opening with the plane of the probe parallel to the plane of the opening. While keeping it parallel to the plane of the opening, the probe should be rotated to its most adverse orientation i.e. major axis of the template oriented parallel to the major axis of the opening. If the Small Torso Probe can be freely inserted through the opening, place the Large Head Probe in the opening, again with the plane of the probe parallel to the plane of the opening, and attempt to freely insert it through the opening.

An opening can pass this test when tested in accordance with the above test procedures in one of two ways.
1). The opening does not admit the Small Torso Probe when it is rotated to any orientation about its own axis, or
2). the opening admits the Small Torso Probe and also admits the Large Head Probe. An opening fails the test under the following conditions: the opening admits the Small Torso Probe but does not admit the Large Head Probe.

Entrapment Test Procedure for Non-Rigid Openings
Place the Small Torso Probe in the opening, tapered end first, with the plane of the probe parallel to the plane of the opening. while keeping its base parallel to the plane of the opening, rotate the probe to its most adverse orientation (major axis of probe parallel to major axis of opening). Determine whether the probe can be pushed or pulled through the opening by a force no greater than 50 lbs. If the Small Torso Probe cannot pass completely through the opening, it conforms to the requirements.

If the Small Torso Probe passes completely through the opening, place the Large Head Probe in the opening with the plane of its base parallel to the plane of the opening. Again attempt to push or pull the probe through the opening with a force no greater than 50 lbs. If the Large Head Probe can pass completely through the opening, it conforms to the requirements.

FORMS

Please feel free to reproduce the following sample Audit Forms for your own personal use in determining the safety of your playground.

GENERAL HAZARDS

Playground: _____ Materials: _____

Location: _____ Surface: _____

Inspected By: _____ Ages of Intended Users: _____

Location of Piece: _____ Weather: _____

Height: _____ Date of Audit: _____

PRIORITY

1). Life threatening, permanent disability
2). Serious or non-disabling injury
3). Slight injury or may not have caused injury but does not meet ASTM F1487-98 or CPSC Handbook for Public Playground Safety.

	CONDITION	PRIORITY	RECOMMENDATIONS
Sharp Points, Corners and Edges • No sharp points, corners or edges on any component of playground equipment. • Wood parts to be smooth and no splinters. • All corners, metal and wood, should be rounded. Minimum curvature of 1/4 inch for corners and edges of suspended assemblies. • Exit end & sides along a slide bed should have special attention. • Exposed open ends of all tubing shall have caps or plugs that cannot be removed without tools.			
Protrusions and Projections • No protrusion or projection allowed that is capable of entangling children's clothing or causing lacerations. • Special attention required at the top of slides to minimize clothing entanglement . • All protrusions are to be tested in accordance with test procedures. No protrusion should extend beyond the face of the gauge. • Inaccessible protrusions exempted. • Exposed bolt ends should not protrude more than two threads beyond face of the nut, must be free of burrs and sharp edges. • No projection shall increase in size or diameter from initial surface to outer end even though it fits within guages. • A projection that extends upward from a horizontal plane is an entanglement hazard.			
Pinch, Crush and Shearing Points • There are no accessible pinch, crush or shearing points on playground equipment. • To determine if there is a possible pinch, crush or shear point, consider the likelihood of entrapping a body part. • Must not entrap a 5/8 inch diameter rod. Opening less than 1 inch acceptable if probe cannot touch any pinch, crush or shear point. • Exemptions: Chain and its method of attachment; attachment area of coil springs to body and base of rocking equipment.			
Tripping Hazards • All anchoring devices such as footings and horizontal bars at the bottom of flexible climbers, to be installed below playing surface. • Special attention to be given to environmental obstacles such as rocks, roots and other protrusions from the ground. • Support posts for balance beams shall not pose a tripping hazard. • Retaining walls should be highly visible; change of elevation should be obvious. Bright colors add to visibility.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Head Entrapment • A component or group of components should not form openings that could trap a child's head. • The distance between any interior surface is to be less than 3-1/2 inches or greater than 9 inches. • The above opening requirement applies to all openings regardless of their height above the ground except where the ground serves as the opening's lower boundary. • Non-rigid openings considered accessible if torso probe penetrates to a depth of 4 inches with a force of 50 lbs.			
Angles • The angle of a vertex formed be adjacent components is not to be less than 55 degrees, unless the lower leg is horizontal or projects downwards. • Exception can be made if a rigid shield is attached to the vertex between adjacent components and the shield is sized to prevent a 9 inch diameter probe from simultaneously touching components on either side of the vertex. • Accessible completely bounded openings shall meet requirements for angles. • Use ASTM test for partially bounded openings.			
Suspended Hazards • Cables, wires, ropes or similar flexible components suspended between play units or from the ground to a play unit within 45 degrees of horizontal to be located outside of high traffic areas. • Suspended members to be brightly colored or contrast with surrounding equipment. • Suspended members located 7 feet or more above the playground surface are exempt. • Non-rigid components must be minimum 1 inch at its widest cross-section dimensions. • Rope, cable or chain shall be fixed at both ends unless 7 inches or less in length. • Elements cannot be looped on itself creating inside perimeter greater than 5 inches. • **Exemptions:** Multiple suspended components at two or more locations can be located below 7 feet when they comply with all other requirements and cannot be looped or stretched to contact another suspended element.			

Comments

Action Taken:

Date: _____

By: _____

Supervisor: _____

STAIRWAYS AND LADDERS

Playground: _____ Materials: _____

Location: _____ Surface: _____

Inspected By: _____ Ages of Intended Users: _____

Location of Piece: _____ Weather: _____

Height: _____ Date of Audit: _____

PRIORITY

1). Life threatening, permanent disability
2). Serious or non-disabling injury
3). Slight injury or may not have caused injury but does not meet ASTM F1487-98 or CPSC Handbook for Public Playground Safety.

Stairways and Ladders

❑ Rung Ladder ❑ Stairway ❑ Other _____

❑ Step Ladder ❑ Ramps (Not for Disabled) _____

	CONDITION	PRIORITY	RECOMMENDATIONS
Stability • Footings are stable and buried below ground level or covered by protective surfacing.			
Corrosion • No corrosion or visible rotting.			
Design • Steps or rungs to be evenly spaced, including the space between the step or rung and the surface of the platform. • Openings between steps or rungs and the underside of the platform should not present an entrapment hazard. • When risers are closed, treads of stairways and step ladders are to prevent the accumulation of water and debris. • Access for rung ladders, flexible climbing devices, arch climbers, stepping surface for final access shall not be above designated play surface it serves.			
Rungs and handgripping Components • Rungs to be a diameter between .95 and 1.55 inches.			
Handrails • Handrails on stairways and stepladders with more than one tread to be continuous; extending the full length of the access and provided on both sides. • Handrails required regardless of the height of the access.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Slope Requirements • ***Rung Ladder:*** Slope (75-90 degrees) *See attached ladder chart for tread width, tread depth and vertical rise.* • ***Step Ladder:*** Slope (50-75 degrees) *See attached ladder chart for tread width, tread depth and vertical rise.* • ***Stairway:*** Slope (less than 50 degrees) *See attached ladder chart for tread width, tread depth and vertical rise.*			
Handrail Height • The vertical distance between the top front edge of a step and the top surface of the handrail should be no less than 22 inches and no more than 38 inches. • Handrail diameter should be between .95 and 1.55 inches. • Any transition from an access to a platform must have handrails or hand holds.			
Sharp Point, Corners & Edges • There are no sharp points, corners or edges. Wood to be smooth and no splinters.			
Protrusions • There are no protrusions. Protrusions to be tested.			
Entrapment Angles • All angles to be greater than 55 degrees, unless lower leg is horizontal or projects downwards.			
Entrapment - Head & Body • Interior opposing surfaces to be less than 3-1/2 inches or greater than 9 inches. • Openings to be tested.			
Hardware • All fasteners to be tight. • Fasteners, connecting or covering devices not removable without use of tools.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Surfacing • Adequate drainage provided • Depth of surfacing material agrees with critical height of equipment. (Use CPSC Chart or matting manufacturer's information)			
Use Zone • Six feet in all directions from perimeter of equipment.			
Spiral Stairway • Shall meet all general requirements for access. • Depth of tread outer edge should be greater than 7 inches for 2-5 years and greater than 8 inches for 5-12 years; both open and closed risers. • Where design does not allow handrails on both sides of stairway, continuos handrail to be provided along outside perimeter of steps.			

Comments

Action Taken:

Date: _____

By: _____

Supervisor: _____

TABLE 1

RUNG LADDERS, STEPLADDERS, STAIRWAYS, AND RAMPS (ACCESS SLOPE; TREAD, RUNG AND RAMP WIDTH; TREAD DEPTH; RUNG DIAMETER; AND VERTICAL RISE, BY AGE OF INTENDED USER)

TYPE OF ACCESS	AGE OF INTENDED USER, YEARS		
	2 THROUGH 5	5 THROUGH 12	2 THROUGH 12
Rung Ladders:*			
• Slope	75 to 90°	75 to 90°	75 to 90°
• Total ladder width**	≥12 in. (300 mm)	≥16 in. (400 mm)	≥16 in. (400 mm)
• Vertical rise (top of rung to top of rung)	≤12 in.*** (300 mm)	≤12 in.*** (300 mm)	≤12 in.*** (300 mm)
• Rung diameter	0.95 to 1.55 in. (24-39 mm)	0.95 to 1.55 in. (24-39 mm)	0.95 to 1.55 in. (24-39 mm)
Stepladders:			
• Slope	50 to 75°	50 to 75°	50 to 75°
• Tread width:			
Single file access	12 to 21 in. (300 to 530 mm)	≥16 in. (400 mm)	12 to 21 in. (300 to 530 mm)
Two-abreast access	*	≥36 in. (910 mm)	*
• Tread Depth:			
Open riser	≥7 in. (180 mm)	≥3 in. (76 mm)	≥7 in. (180 mm)
Closed riser	≥7 in. (180 mm)	≥6 in. (150 mm)	≥7 in. (180 mm)
• Vertical rise (top of step to top of step)	≤9 in.*** (230 mm)	≤12 in.*** (300 mm)	≤9 in.*** (230 mm)
Stairways:			
• Slope †	<50°	<50°	<50°
• Tread width:			
Single file access	≥12 in. (300 mm)	≥16 in. (400 mm)	≥16 in. (400 mm)
Two-abreast access	≥30 in. (760 mm)	≥36 in. (910 mm)	≥36 in. (910 mm)
• Tread Depth:			
Open riser	≥7 in. (180 mm)	≥8 in. (200 mm)	≥8 in. (200 mm)
Closed riser	≥7 in. (180 mm)	≥8 in. (200 mm)	≥8 in. (200 mm)
• Vertical rise (top of step to top of step)	≤9 in.*** (230 mm)	≤12 in.*** (300 mm)	≤9 in.*** (230 mm)
Ramps (doesn't address wheelchair use):			
• Slope (vertical/horizontal)	≤1:8	≤1:8	≤1:8
• Width			
Single file access	≥12 in. (300 mm)	≥16 in. (400 mm)	≥16 in. (400 mm)
Two-abreast access	≥30 in. (760 mm)	≥36 in. (910 mm)	≥36 in. (910 mm)

* *Not recommended as sole access for preschoolers.*

** *Excluding side supports.*

*** *Entrapment provisions apply.*

† **Note: CPSC Handbook calls for slope of stairways to be no more than 35 degrees.**

Foot Note: Information reproduced from ASTM F1487-98, Standard Consumer "Safety Performance Specification for Playground Equipment for Public Use."

PLATFORMS

Playground: _____ Materials: _____

Location: _____ Surface: _____

Inspected By: _____ Ages of Intended Users: _____

Location of Piece: _____ Weather: _____

Height: _____ Date of Audit: _____

PRIORITY

1). Life threatening, permanent disability
2). Serious or non-disabling injury
3). Slight injury or may not have caused injury but does not meet ASTM F1487-98 or CPSC Handbook for Public Playground Safety.

	CONDITION	PRIORITY	RECOMMENDATIONS
Design • Platforms to be within +2 degrees of a horizontal plane. • Openings provided to allow for drainage.			
Guardrail • Elevated surface (2-5 year olds) more than 20 inches high to have guardrail. • Top surface of guardrail (2-5 years old) to be 29 inches high and bottom surface no more than 23" above platform. • Elevated surface (5-12 years old) more than 30 inches high to have guardrail. • Top surface of guardrail (5-12 years old) to be 38 inches high and bottom surface no more than 26 inches above platform. • Guardrails shall completely surround elevated surface except for necessary entrances and exits. • The maximum clear opening without a top horizontal guardrail shall be 15 inches (380mm). Stairs, ramps and upper body equipment exempted.			
Protective Barrier • Elevated surface (2-5 years old) more than 30 inches high to have protective barrier. • Top surface of protective barrier (2-5 years old) to be 29 inches high and non-climbable. • Elevated surface (5-12 years old) more than 48 inches high to have protective barrier. • Top surface of protective barrier (5-12 years old) to be 38 inches high and non-climbable. • Protective barriers shall completely surround elevated surface except for necessary entrances and exits. • The maximum clear opening without a top horizontal guardrail shall be 15 inches (380mm). Stairs, ramps and upper body equipment exempted.			
Stepped Platforms • The maximum difference in height between stepped platforms should be: 2-5 year olds: 12 inches 5-12 year olds: 18 inches • If the space exceeds 9 inches and the height of the lower platform exceeds 30 inches for 2-5 year olds or 48 inches for 5-12 year olds, infill to be used to reduce space to less than 3-1/2 inches.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Sharp Point, Corners & Edges • There are no sharp points, corners or edges. Wood to be smooth and no splinters.			
Protrusions • There are no protrusions. Protrusions to be tested.			
Entrapment Angles • All angles to be greater than 55 degrees, unless lower leg is horizontal or projects downwards.			
Entrapment - Head & Body • Interior opposing surfaces to be less than 3-1/2 inches or greater than 9 inches. • Openings to be tested.			
Hardware • All fasteners to be tight. • Fasteners, connecting or covering devices not removable without use of tools.			

Comments

Action Taken:

Date: _____

By: _____

Supervisor: _____

SLIDES

Playground: _____ Materials: _____
Location: _____ Surface: _____
Inspected By: _____ Ages of Intended Users: _____
Location of Piece: _____ Weather: _____
Height: _____ Date of Audit: _____

PRIORITY

1). Life threatening, permanent disability
2). Serious or non-disabling injury
3). Slight injury or may not have caused injury but does not meet ASTM F1487-98 or CPSC Handbook for Public Playground Safety.

Slides

❑ Straight ❑ Tube ❑ Half-Tube
❑ Spiral ❑ Embankment ❑ Roller

	CONDITION	PRIORITY	RECOMMENDATIONS
Layout • Metal slides to face North or in a shaded area. • Located in uncongested area.			
Stability • Footings are stable and buried below ground level or covered by protective surfacing			
Corrosion • No corrosion or visible rotting			
Slide Access • ***Rung Ladder:*** Slope (75-90 degrees) *See attached ladder chart for tread width, tread depth and vertical rise.* • ***Step Ladder:*** Slope (50-75 degrees) *See attached ladder chart for tread width, tread depth and vertical rise.* • ***Stairway:*** Slope (ASTM: less than 50 degrees); (CPSC: less than 35 degrees). *See attached ladder chart for tread width, tread depth and vertical rise.* • Ladder rung diameter: .95 - 1.55 inches • Handrail diameter: .95 - 1.55 inches • Continuous handrails provided with hand-rail height between 22 inches and 38 inches.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Slide Platform • Minimum length of 22 inches - CPSC (14 inches - ASTM). • Width equal or greater than width of slide. • Guardrails or protective barriers to surround platform. • No spaces or gaps between platform and start of sliding surface. • Handholds provided at slide entrance. • Means provided to channel user into sitting position (guardrail or hood that does not encourage climbing).			
Sliding Surface • Average incline of 50 degrees. • Flat open chutes to have minimum side height of 4 inches extending full length of slide. • Sides to be an integral part of chute without gaps between side and sliding surface. • Cross section of 1/2 tube slide side height no less than half the width of slide.			
Exit Region • All slides to have an exit region. • 11 inches minimum exit region length. • Slides no more than 4 feet high to have an exit region height of 11 inches. • Slides over 4 feet high to have an exit region between 7 inches and 15 inches above protective surface. • Slide exit edges to be rounded or curved. • Radius of exit region curvature shall be 30 inches or greater.			
Embankment Slide • Same as straight slide (where applicable). • Means provided to prevent use of skateboards and bicycles.			
Spiral Slides • Same as straight slides. • Only short spiral slides for 2 - 5 year old children. • Clear area, 21 inches wide, for entire length of slide, from inside face of sidewall to outer edge of slide.			
Tube Slides • Same as straight slides. • Min. internal diameter not less than 23 inches. • Top surface of tube treated to prevent sliding on top of tube.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Roller Slides • Meet all general slide requirements. • No pinch, crush, shear, entrapment, entanglement or catch points. Must not admit 3/16 inch diameter neoprene rod. • No missing rollers or broken bearings.			
Guardrail • Elevated surface (2-5 years old) more than 20 inches high to have guardrail. • Top surface of guardrail (2-5 years old) to be 29 inches high and bottom surface no more than 23 inches above platform. • Elevated surface (5-12 years old) more than 30 inches high to have guardrail. • Top surface of guardrail (5-12 years old) to be 38 inches high and bottom surface no more than 26 inches above platform.			
Protective Barrier • Elevated surface (2-5 years old) more than 30 inches high to have protective barrier. • Top surface of protective barrier(2-5 years old) to be 29 inches high and non-climb-able. • Elevated surface (5-12 years old) more than 48 inches high to have protective barrier. • Top surface of protective barrier (5-12 years old) to be 38 inches high and non-climb-able.			
Sharp Point, Corners & Edges • There are no sharp points, corners or edges. Wood to be smooth and no splinters.			
Protrusions • There are no protrusions. Protrusions to be tested.			
Entrapment Angles • All angles to be greater than 55 degrees, unless lower leg is horizontal or projects downwards.			
Entrapment - Head & Body • Interior opposing surfaces to be less than 3-1/2 inches or greater than 9 inches. • Openings to be tested.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Hardware • All fasteners to be tight. • Fasteners, connecting or covering devices not removable without use of tools.			
Surfacing • Adequate drainage provided • Depth of surfacing material agrees with critical height of equipment (Use CPSC Chart or matting manufacturer's information).			
Use Zone • 6 feet in all directions from perimeter of equipment. Exit region requires special attention. • Use zone at the exit of the slide to extend a minimum of 6 feet from the end of the slide or for a minimum distance of H + 4 feet which ever is greater up to a maximum of 14 feet. H is the platform height and the 4 feet measurement is made from a point on the slide chute where the gradient has been reduced to 5 degrees from the horizontal.			

Comments

Action Taken:

Date: _____

By: _____

Supervisor: _____

SWINGS

Playground: _____ Materials: _____

Location: _____ Surface: _____

Inspected By: _____ Ages of Intended Users: _____

Location of Piece: _____ Weather: _____

Height: _____ Date of Audit: _____

PRIORITY

1). Life threatening, permanent disability
2). Serious or non-disabling injury
3). Slight injury or may not have caused injury but does not meet ASTM F1487-98 or CPSC Handbook for Public Playground Safety.

Swings

❑ Single-Axis Swing ❑ Multi-Occupancy ❑ Swinging Exercise Rings/Trapeze Bar

❑ Multi-Axis Swing ❑ Rope Swing ❑ Tot Swing

	CONDITION	PRIORITY	RECOMMENDATIONS
Location • Swings to be located away from other equipment and activities.			
Stability • Footings stable and buried below ground level or covered by protective surfacing.			
Corrosion and Wear • No rotting, corrosion or visible wear on chain and S-hooks.			
Structure Design • Single axis swings to have no more than two swings per bay. • Single axis swings not to be attached to composite structure. • A-frame support structures not to have horizontal cross bars. • Tot swing to be suspended from structures separate from other swings or suspended in a different bay of the same structure.			
Seat Design & Placement • Seats designed for only one user at a time • Wood or metal seats not to be used. • Tot seats to have support on all sides and not present a strangulation hazard. • Swing hangers spaced wider than seats, not less than 20 inches. • 24 inches minimum clearance between seats • 30 inches minimum clearance between seat and structure, measured 5 feet above protective surface. • All S-hooks to be closed completely.			
Clearances • Vertical distance at least 12 inches between underside of occupied seat and protective surface.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Multi-Axis Tire Swings • Tire swings not suspended from a structure having other swings in the same bay. • Steel-belted radials to be closely examined to insure no exposed steel belts. • Drain holes to be provided. • No heavy truck tires, plastic may be used. • Due to added stress of rotation, inspect all hanger mechanisms for wear. • No accessible pinch points. • All S-hooks to be closed completely, .04 inches. • Only one rotating swing in each bay. No limit on number of bays. • Tire swings not to be attached to composite structure. • May accommodate more than one user. Weight no more than 35 lbs.			
Swings for Pre-School Children • Pivot points no greater than 8 feet above protective surfacing.			
Minimum Clearance • The minimum clearance between the seating surface of tire and the uprights of supporting structure to be 30 inches when tire is in a position closest to support structure.			
Swings Not Recommended for Public Playground. • Multiple Occupancy Swing (tire swings are the exception). • Animal Figure Swing. • Free Swinging Rope Swings. • Swinging Exercise Rings and Trapeze Bars. (This does not apply to overhead rings).			
Sharp Point, Corners & Edges • There are no sharp points, corners or edges. Wood to be smooth and no splinters.			
Protrusions • There are to be no protrusions. Protrusions to be tested.			
Entrapment Angles • All angles to be greater than 55 degrees, unless lower leg is horizontal or projects downwards.			
Entrapment - Head & Body • Interior opposing surfaces to be less than 3-1/2 inches or greater than 9 inches. • Openings to be tested.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Hardware • All fasteners to be tight. • Fasteners, connecting or covering devices not removable without use of tools. • Hangers shall have bearings, bushings or other means of reducing friction and wear.			
Surfacing • Adequate drainage provided • Depth of surfacing material agrees with critical height of equipment (Use CPSC Chart or matting manufacturer's information).			
Use Zone • Six feet from side perimeters of equipment. • ***Single-Axis Swings:*** Minimum distance of 2 times the height of the pivot point (applies to both in front of behind pivot point) to the surface. • ***Multi-Axis Tire Swing:*** Minimum distance in all directions of 6 feet + length of supporting member. • ***Tot Swing:*** Minimum distance of 2 times the height of the pivot point to the bottom of the occupied seat.			

Comments

Action Taken:

Date: _____

By: _____

Supervisor: _____

CLIMBING & UPPER BODY EQUIPMENT

Playground: _____ Materials: _____

Location: _____ Surface: _____

Inspected By: _____ Ages of Intended Users: _____

Location of Piece: _____ Weather: _____

Height: _____ Date of Audit: _____

PRIORITY

1). Life threatening, permanent disability
2). Serious or non-disabling injury
3). Slight injury or may not have caused injury but does not meet ASTM F1487-98 or CPSC Handbook for Public Playground Safety.

Climbing & Upper Body Equipment

❑ Arch Climbers ❑ Sliding Poles ❑ Track Rides ❑ Other _____

❑ Horizontal Ladders ❑ Balance Beams ❑ Roofs _____

	CONDITION	PRIORITY	RECOMMENDATIONS
Stability • Footings are stable and buried below ground level or covered by protective surfacing.			
Corrosion • No corrosion or visible rotting.			
Design • Climbers not to have climbing bars or structural components in the interior of the structure onto which a child may fall more than 18 inches. • Climbing devices intended for 2-5 year olds to offer an easy way out. • Flexible access devices should not be used as sole access to other components.			
Climbers With Non-Rigid Components • Connections between ropes, cables, or chains within the climbing grid to be securely fixed. • Spacing between the horizontal and vertical climbing grid to satisfy all entrapment criteria. • Flexible grid climbing devices not recommended as sole access to equipment for children ages 2-5 years of age. • Flexible climbing devices to be securely anchored at both ends. • Bottom anchoring device to be below the level of playing surface. • For pre-school, users should be able to bring both feet to the same level before ascending to next level.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Arch Climbers • Free standing arch climbers not recommended for 2-5 year old. • Hand or foot rung diameter to be between .95 - 1.55 inches. • Spacing of rungs on arch climbers to follow recommendations for rung ladders (see Table 2 - CPSC or ASTM). • Spacing between the horizontal and vertical components should satisfy all entrapment criteria. • Arch climbers should not be the sole means of access to equipment. • Arch ladders as access shall have means of hand support while climbing. • Full arch ladders are not recommended for ages 2-5.			
Horizontal Ladder & Overhead Rings • To be used only by 4-12 year olds (CPSC), 2-12 years (ASTM) • Space between adjacent rungs of overhead ladders to be greater than 9 inches. • Center-to-center spacing of overhead rungs not to exceed 15 inches (this does not apply to the spacing of overhead rings). • The first handhold not placed directly above the platform or climbing rungs. • Horizontal distance from take-off landing to first handhold no greater than 10 inches. Where access and egress are rungs, horizontal distance to first handhold between 8 inches and 10 inches. • Maximum height: 2-5 years old – 60 inches 5-12 years old – 84 inches • Maximum height of landing structure: 2-5 years old – 18 inches above protective surface 5-12 years – 36 inches above protective surface			
Sliding Poles • Not recommended for 2-5 year olds (CPSC). • Sliding poles to be continuous with no protruding welds or seams along sliding surface. • Sliding pole not to change direction along the sliding portion. • Horizontal distance between sliding pole and the edge of the platform or other structure used for access to be no less than 18" and no more than 20 inches. • Sliding pole to extend at least 60 inches above level of the platform. • The diameter of the sliding pole to be no greater than 1.9 inches. • Upper access to pole from one height only. • Maximum horizontal dimension to 15 inches at platform opening.			
Climbing Ropes • Vertically suspended climbing ropes must be securely anchored to a footing. • Climbing ropes secured at both ends, shall not be capable of forming loops of more than 5 inches diameter.			
Balance Beams • Maximum height: 2-5 years old – 12 inches 5-12 years old – 16 inches • Support posts for balance beam shall not pose a tripping hazard			
Roofs • Should contain no designated play surfaces.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Track Rides • Not recommended for children under 5 years old. • Lowest portion of hand-gripping component minimum 64 inches. • Elevated landings minimum 36 inches long, 32 inches wide. • Must not obstruct user in landing area. • Center to center distance between adjacent tracks 48 inches or more.			
Sharp Point, Corners & Edges • There are no sharp points, corners or edges. Wood to be smooth and no splinters.			
Protrusions • There are no protrusions. Protrusions to be tested.			
Entrapment Angles • All angles to be greater than 55 degrees, unless lower leg is horizontal or projects downwards. Test for partially bounded openings.			
Entrapment - Head & Body • Interior opposing surfaces to be less than 3-1/2 inches or greater than 9 inches. • Openings to be tested.			
Hardware • All fasteners to be tight. • Fasteners, connecting or covering devices not removable without use of tools.			
Surfacing • Adequate drainage provided • Depth of surfacing material agrees with critical height of equipment (Use CPSC Chart or matting manufacturer's information).			
Use Zone • Six feet in all directions from perimeter of equipment.			

Comments

Action Taken:

Date: _____

By: _____

Supervisor: _____

ROTATING & ROCKING EQUIPMENT

Playground: _____ Materials: _____

Location: _____ Surface: _____

Inspected By: _____ Ages of Intended Users: _____

Location of Piece: _____ Weather: _____

Height: _____ Date of Audit: _____

PRIORITY

1). Life threatening, permanent disability
2). Serious or non-disabling injury
3). Slight injury or may not have caused injury but does not meet ASTM F1487-98 or CPSC Handbook for Public Playground Safety.

Rotating & Rocking Equipment

❑ Merry-Go-Rounds ❑ Spring Rockers ❑ Log Rolls ❑ Other _____

❑ Seesaws ❑ Trampolines _____

	CONDITION	PRIORITY	RECOMMENDATIONS
Stability • Footings are stable and buried below ground level or covered by protective surfacing.			
Corrosion • No corrosion or visible rotting.			
Merry-go-rounds • The rotating platform to be continuous and approximately circular. • The difference between the minimum and maximum radii of a non-circular platform not to exceed 2.0 inches. • No component of the apparatus, including the handgrips, should extend beyond the perimeter of the platform. • Children to be provided with handgrips with a diameter between .95 and 1.55 inches. • No accessible shearing or crushing mechanisms in the undercarriage. • The surface of the platform to be continuous with no openings between the axis and the outside edge that allow a 5/16 inch diameter rod to pass through the surface. • A means to limit the peripheral speed of rotation to a maximum of 13 feet per second. • No oscillatory (up and down) motion. • Maximum height of platform - 14 inches above protective surface (underside no less than 9 inches above surface). Platforms less than 20 inches diameter exempt. • Handgrips shall be provided or platform should be tub or dish-like.			
Log Rolls • Require hand-gripping components • Not recommended for children ages 2-5 years. • Hand-gripping components between .95-1.55 inches. • Highest point of roller logs no more than 18 inches above surface.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Seesaws • Not recommended for 2-5 year old children unless they are equipped with a spring centering device. • Partial car tires or some other shock absorbing material to be embedded in the ground underneath the seats of fulcrum seesaws, or secured on the underside of the seats. • Handholds to be provided at each seating position for gripping with both hands and should not turn when grasped. • Handgrips for two hands minimum length of 6 inches, should not protrude beyond seat sides. • Diameter of handgrips to be between .95-1.55 inches. • Handholds are not to protrude beyond the side of the seat. • Footrests are not to be provided on fulcrum seesaws unless they are equipped with a spring centering device. • Maximum attainable seat height - 5 feet above the surface. • Fulcrum should not present a pinch or crush hazard.			
Spring Rocking Equipment • Seat design to minimize the likelihood of the rocker being used by more than the intended number of users. • Each seating position to be equipped with handgrips and footrests. • Diameter of handgrips to be between .95-1.55 inches. • The spring should not pinch children's hands or feet between coils or between the spring and any part of the rocker. • Handgrips for on hand - minimum length - 3 inches. Handgrips for two hands - minimum length - 6 inches. Footrests - minimum width of 3.5 inches. • Installed height of seat (unloaded and at rest) not less than 14 inches nor more than 28 inches above platform surface.			
Trampolines • Not recommended for use on public playgrounds.			
Sharp Point, Corners & Edges • There are no sharp points, corners or edges. Wood to be smooth and no splinters.			
Protrusions • There are no protrusions. Protrusions to be tested.			
Entrapment Angles • All angles to be greater than 55 degrees, unless lower leg is horizontal or projects downwards.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Entrapment - Head & Body • Interior opposing surfaces to be less than 3-1/2 inches or greater than 9 inches. • Openings to be tested.			
Hardware • All fasteners to be tight. • Fasteners, connecting or covering devices not removable without use of tools.			
Surfacing • Adequate drainage provided • Depth of surfacing material agrees with critical height of equipment. (Use CPSC Chart or matting manufacturer's information)			
Use Zone • ***Merry-Go-Rounds:*** Use zone to extend 6 feet beyond the perimeter of the platform. • ***Seesaws:*** Use zone to extend a minimum of 6 feet in all directions from the perimeter of the equipment. • ***Spring Rocking Equipment:*** Use zone to extend a minimum of 6 feet from the "at rest" perimeter of equipment. Adjacent spring rockers with a maximum seat height of 30 inches when intended for selling, may share the same use zone. • When intended for standing, use zone to be no less than 7 feet in all directions, from at rest perimeter.			

Comments

Action Taken:

Date: _____

By: _____

Supervisor: _____

SURFACING

Playground: _____ Materials: _____

Location: _____ Surface: _____

Inspected By: _____ Ages of Intended Users: _____

Location of Piece: _____ Weather: _____

Height: _____ Date of Audit: _____

PRIORITY

1). Life threatening, permanent disability
2). Serious or non-disabling injury
3). Slight injury or may not have caused injury but does not meet ASTM F1487-98 or CPSC Handbook for Public Playground Safety.

	CONDITION	PRIORITY	RECOMMENDATIONS
Shock Absorbency of Surfacing Material • Surfacing material must yield both a peak deceleration of no more than 200 G's and a HIC (Head Injury Criteria) of no more than 1,000 when tested in accordance with procedures described in ASTM F1292 "A Standard Specification for Impact Attenuation of surface Systems Under and Around Playground Equipment."			
Critical Height • The surfacing material used under and around a particular piece of playground equipment is to have a Critical Height value of at least the height of the highest accessible part of the equipment.			
Highest Accessible Part of Equipment • ***Swings:*** The highest accessible part of a swing is the height of the pivot point where the swing's suspending elements connect to the supporting structure. • ***Elevated Platforms Surrounded by Guardrails:*** When the platform is surrounded by a guardrail, the highest accessible part is the height above the playing surface of the top of the guardrail (ASTM). CPSC measures platforms with guardrails from platform. • ***Elevated Platforms Surrounded by Protective Barriers:*** When a platform is surrounded by a protective barrier, the highest accessible part is the height of the platform surface above the playing surface.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Highest Accessible Part of Equipment (Cont'd) • ***Climbers and Horizontal Ladders:*** The highest accessible part is the maximum height of the structure. • ***Merry-Go-Rounds:*** The highest accessible part is the height above the ground of any part at the perimeter on which a child may sit or stand. • ***Seesaws:*** The highest accessible part is the maximum height attainable by any part of the seesaw. • ***Spring Rockers:*** The highest accessible part is the maximum height above the playing surface of the seat or designated play surface.			
Acceptability of Various Surfacing Materials • Hard surfacing materials, such as asphalt or concrete, are unsuitable for use under and around playground equipment. • Earth surfaces such as soils and hard packed dirt are unsuitable for use under and around playground equipment. • Grass and turf are unsuitable for use under and around playground equipment. ***Unitary Materials*** *(rubber mats or rubberlike materials):* • To have identification of Critical Height rating. This information is to be obtained from the manufacturer of this material. ***Loose-Fill Material:*** • Not to be installed over hard surfaces such as asphalt or concrete. • Requires a method of containment. • Requires good drainage under material. • Requires periodic renewal or replacement and continuous maintenance to maintain proper depth and remove foreign matter. • Refer to Table listing the critical height (expressed in feet) for seven loose fill materials when tested in an uncompressed state at depths of 6, 9 and 12 inches. This test was conducted by CPSC staff in accordance with the voluntary ASTM F1292 standard.			
Use Zones for Equipment • The area beneath and immediately adjacent to equipment that is designated for unrestricted circulation and on whose surface it is predicted that a user would land when falling from or exiting the equipment. Surface shall meet requirements of ASTM F1292 from the maximum fall height.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Recommendations for Use Zone • ***Stationary Equipment:*** The use zone is to extend a minimum of 6 feet in all directions from the perimeter of the equipment. • ***Slides:*** The use zone in front of the exit of the slide is to extend a minimum distance of 6 feet from the end of the slide chute or for a distance of H + 4 (maximum 14 feet) feet whichever is the greater. H is the height of the slide platform. • ***Single-Axis Swings:*** The use zone is to extend to the front and rear of a single axis swing a minimum distance of 2 times the height of the pivot point above the surfacing material. • ***Multi-Axis Swings:*** The use zone is to extend in any direction from a minimum distance of 6 feet + the length of the suspending members. • ***Merry-Go-Rounds:*** The use zone is to extend a minimum of 6 feet beyond the perimeter of the platform. • ***Spring Rocking Equipment:*** The use zone is to extend a minimum of 6 feet from the perimeter of the equipment but adjacent spring rockers with a maximum seat height of 30 inches may share the same use zone. Rocking equipment meant for standing requires a use zone of 7 feet; use zones may not be shared.			

Comments

Action Taken:

Date: _____

By: _____

Supervisor: _____

TABLE 2

CRITICAL HEIGHTS (IN FEET) OF TESTED MATERIALS

MATERIAL	UNCOMPRESSED DEPTH 6 INCH	UNCOMPRESSED DEPTH 9 INCH	UNCOMPRESSED DEPTH 12 INCH	COMPRESSED DEPTH 9 INCH
Wood Chips*	7	10	11	10
Double Shredded Bark Mulch	6	10	11	7
Engineered Wood Fibers **	6	7	>12	6
Fine Sand	5	5	9	5
Coarse Sand	5	5	6	4
Fine Gravel	6	7	10	6
Medium Gravel	5	5	6	5
Shredded Tires***	10-12	N/A	N/A	N/A

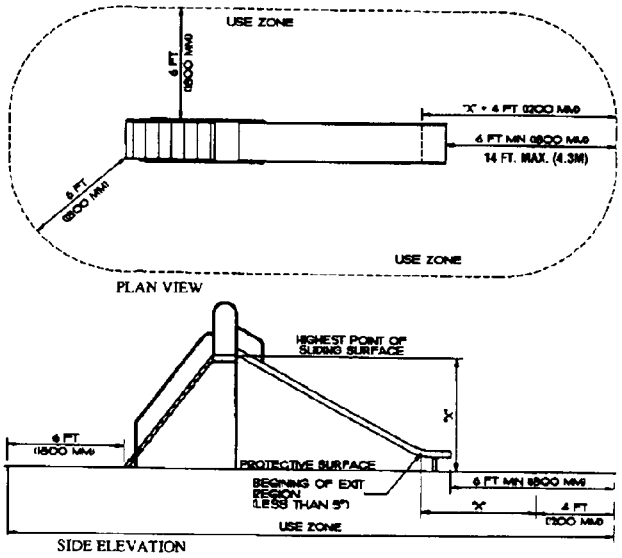
** This product was referred to as Wood Mulch in previous versions of this handbook. The tern Wood Chips more accurately describes the product.*

*** This product was referred to as Uniform Wood Chips in previous versions of this handbook. In the playground industry, the product is more commonly known as Engineered Wood Fibers.*

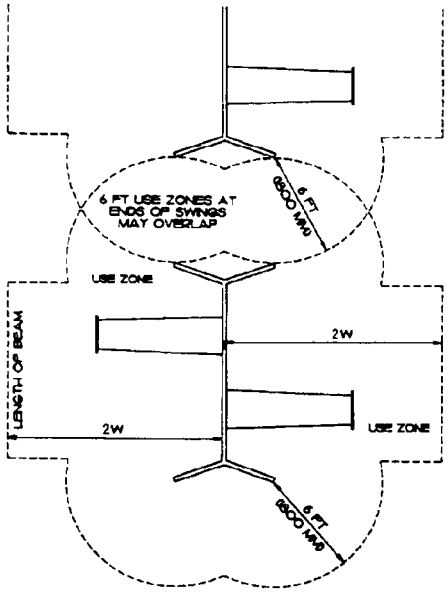
**** This data is from tests conducted by independent testing laboratories on a 6 inch depth of uncompressed shredded tire samples produced by four manufacturers. The tests reported critical heights which varied form 10 feet to greater than 12 feet. It is recommended that persons seeking to install shredded tires as a protective surface request test data from the supplier showing the critical height of the material when it was tested in accordance with ASTM F1292.*

Foot Note: Information reproduced for the 1998 publication of the CPSC "Handbook for Public Playground Safety."

FALL ZONE FOR SLIDES

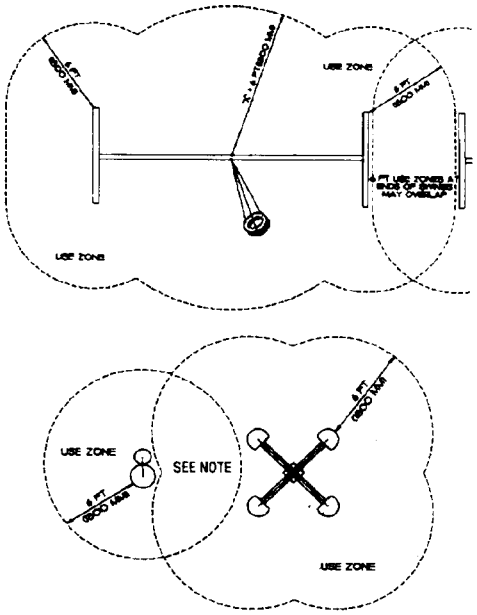


USE ZONE FOR SINGLE-AXIS TIRE SWING



Note: W=The vertical distance from the top of sitting surface to pivot point.

USE ZONE FOR MULTI-AXIS TIRE SWING



Foot Note: Information reproduced from ASTM F1487-98, Standard Consumer "Safety Performance Specification for Playground Equipment for Public Use."

ACCESSIBILITY TO THE DISABLED

	CONDITION	PRIORITY	RECOMMENDATIONS
Accessible Route • At least one accessible route within use zone, form perimeter to all accessible play structures. • Clear width of route not less than 60 inches.			
Ramps (for deck access) • Clear width of ramp - 36 inches minimum. • Slope not greater than 1:12 feet. • Horizontal run not greater than 12 feet. • Level landing not less than 60 inches diameter at bottom and top of each run. • Ramps greater than 30 inches high (2-5 years old) measured at the highest point or higher than 48 inches (5-12 years old), must have protective barriers. • Ramps greater than 30 inches high (2-5 years old) shall have a handrail, on each side of the ramp, 26 inches high; greater than 48 inches (5-12 years old) requires 28 inch handrails. • Ramps less than or equal to 30 inches high (2-5 years old) or 48 inches high (5-12 years old) shall have 2 handrails on each side of ramp, 26-28 inches high and 12-16 inches high. • Ramps where space between barrier and ramp is over 1 inch must have curb on both edges that projects a minimum of 2 inches above the ramp. • Ramps with 2 rails and no barriers must have a curb on both edges that projects a minimum of 2 inches above the ramp. • Ramps where barrier is beyond the edge of the ramp must have a curb that projects a minimum of 2 inches above the ramp.			
Landings • With play components must have wheelchair park and play space, minimum size 30 inches by 48 inches, must still allow for adjacent circulation path of 36 inches minimum. • Edges of landings must provide means to prevent wheelchairs from falling off. • Level landings of ramps must have a diameter no less than 60 inches at bottom and top of each run.			
Transfer Points • Must be between 14 inches and 18 inches above the accessible route of travel or wheelchair accessible platform. • Clear width of transfer point no less than 24 inches, depth no less than 14 inches. • Handrails or other means of support required to assist users in transfer out of wheelchairs. • Turning space at base of transfer point must be 60 inches in diameter, or a T-shaped area, to accommodate one wheelchair. • Additional parking spaces for wheelchairs shall be a minimum of 30 inches wide by 48 inches long, located outside accessible route of travel.			

	CONDITION	PRIORITY	RECOMMENDATIONS
Wheelchair Accessible Platforms • Clear width for single wheelchair passage not less than 36 inches, may be reduced to 32 inches, for not more than 24 inches along the path of travel. • Clear width for 2 wheelchairs to pass shall not be less than 60 inches. • Clear width for one wheelchair and one able-bodied user shall not be less than 44 inches. • Openings between deck members of wheelchair accessible surfaces shall be no greater than 1/2 inch. • Guardrails or protective barriers required on all accessible platforms. Those with guardrails require a curb of minimum 2 inches height. • Turning space shall be 60 inches in diameter of a T-shaped area. Turning space and parking space must not overlap. • Accessible platforms or steps shall have a maximum vertical rise of 8 inches. • Platform or step should be minimum 14 inches deep and 25 inches wide.			
Accessible Play Opportunities • Equipment that requires wheelchair user to pull partially under the equipment (tables) need a minimum vertical leg clearance of 24 inches. • Top of playing surface shall be maximum 30 inches above accessible surface. • Upper body equipment (horizontal ladders and rungs) for wheelchair users shall have grasping object no higher than 54 inches above the accessible surface. • Steering wheels and interactive panels must be positioned within wheelchair user's side reach of minimum 9 inches and maximum 48 inches from accessible surface.			

MEET THE AUTHOR

Dr. Frances Wallach, one of the country's leading professionals in the park and recreation field, is widely recognized as an educator, consultant and expert in safety and liability litigation.

Dr. Wallach, with an Ed. D. in Applied Human Development from Columbia University, is a recognized national authority on risk reduction in park and recreation facilities and programs. She served on the Safety Standards Panel of the United States Consumer Products Safety Commission from its inception in the development of its Guidelines for Public Playground Equipment and was instrumental in the construction of those Guidelines. She serves as consultant to the country's leading manufacturers of park and playground equipment, providing expertise in product development, safety considerations and marketing.

Dr. Wallach has gained national recognition for her professional seminars and training programs in safety and liability and staff training. These seminars have been presented in over forty states and Canada. Author of many professional articles and training manuals, Dr. Wallach is a recognized authority on therapeutic, senior citizen and mobile recreation. She is on faculty at New York University and attained national recognition as a member of the President's Committee for Employment of the Handicapped. She currently serves as national chair of the ASTM Committee, which has developed safety standards for public use playground equipment.

Dr. Wallach, former Superintendent of Recreation and Parks Program Development for Nassau County, New York, is past president of the New York State Recreation and Park Society and recipient of many awards from local, state and national organizations. She has keynoted many local and state conferences on issues ranging from the identification of playground hazards to the impact of liability suits on the delivery of leisure services.

Dr. Wallach has developed master plans, marketing systems, management structures, training programs and risk reduction programs for municipal, state, national and community agencies.